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FIG. 1

Construct of Amb a1 cDNA - II

Full-length Amb a1 (396 codon)

Plant Leader Sequence (36AA)

 $\Delta 36$ Amb a1

ssHA\(\Delta\)36 Amb a1

Virus Leader Sequence (14AA)

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FIG. 2

Comparison of codon usage (Plant vs. Human)

| T | T | T | C |
|---|---|---|------------------|
| | 1 | • | \boldsymbol{C} |

| | Plant | Human |
|-----|-------|-------|
| CAT | 83% | 0% |
| CAC | 17% | 100% |

GLN

| | Plant | Human |
|-----|-------|-------|
| CAA | 90% | 30% |
| CAG | 10% | 70% |

ASP

| | Plant | Human |
|-----|-------|-------|
| GAT | 76% | 31% |
| GAC | 24% | 69% |

GLU

| | Plant | Human |
|-----|-------|-------|
| GAA | 69% | 25% |
| GAG | 31% | 75% |

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FIG. 3

Expression of Amb a1 in COS-7 cell - III

| 43 kDa | 1 2 3 4 5 | 39 kDa |
|---------------------|-----------|--------|
| 38 kDa [┌] | | |

1: Purified AgE

2: Amb a1/pNDKm (x1)

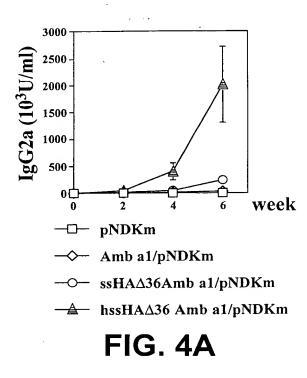
3: \triangle 36Amb a1/pNDKm (x3)

4: $ssHA\Delta 36Amb \ a1/pNDKm$ (x 3)

5: $hssHA\Delta 36Amb \ a1/pNDKm \ (x 10)$

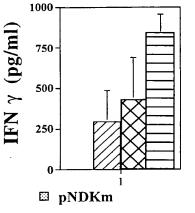


Induction of Antigen-specific Antibody and Cytokine in vivo - III



Con the time that were

"I" C"I ALL I"I CL". I"I



- ☑ Amb a1/pNDKm
- **S** ssHA∆36 Amb a1/pNDKm
- hssHA∆36 Amb a1/pNDKm

FIG. 4B

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Induction of Antigen-specific Antibody and Cytokine in vivo - VI

(Co-injection of ISS-ODN with $50\mu g$ of hssHA $\!\Delta 36Amb$ a1/pNDKm)

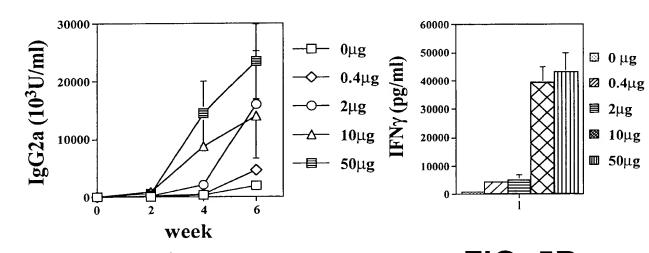


FIG. 5A

Harry Harly Carly Warrer Harry Harry

Tr. Andaha And alia, And an

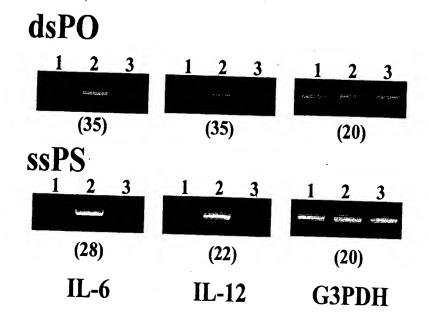
FIG. 5B

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FIG. 6

In vivo Efficacy of ISS-ODN (dsPO vs. ssPS)



1: PBS, 2: ISS-ODN, 3: M-ODN

- Injection of ISS-ODN(i.v.) [200µg/mouse]
- Isolation of spleen after 2 hr post-injection
- Isolation of mRNA
- Detection of IL-6/IL-12 transcript by RT-PCR

10µg/mouse 0.5 mg/mouse

50µg/mouse

Reduction of Amb a1-specific IgE in vivo (week 8)

אייון באוף להקוף והשל להגוף אייון קווא מיווים ויון אייון באוף להעף אינון וויון אייון אייון אייון אייון אייון א להגוף להגוף להגוף אייון להגוף אייון להגוף אייון איי

FIG. 7A

